

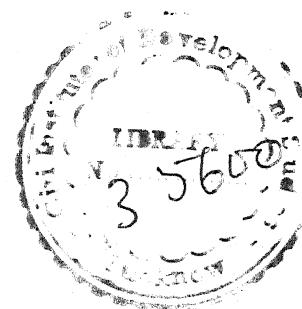
# PARTICIPATION IN FOREST MANAGEMENT

## A Case Study of Uttarakhand

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Forest Management



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## Introduction

In the last few decades, degradation of mountain and hilly environment and poverty of the people has been focused of much discussions and development interventions. While the solution of poverty required an accelerated use of natural resources, the ecological fragility of the region and the need for conservation of its natural resources impose serious restrictions. In addition to the complex natural and ecological process occurring in these mountain environments, as the youngest and largest mountain system in the world, it is still growing and is tectonically very active with clusters of faults which are epicentres of seismicity. Such clusters are prone to high seismic hazards and resultant drastic physiographic and environmental changes.<sup>1</sup> Large scale human activities in the region, in particular the extensive deforestation and intensive farming activities on steep slopes, heavy population pressure on land, water, biological resources, and the adverse impacts of large development projects have resulted in overall environmental degradation and depletion of forests soil erosion, decline in soil fertility growing scarcity of water resources, and loss of bio-diversity.

Increasing level of deforestation has been well recognised as the root cause of environmental degradation in the hilly areas. Thus 'deforestation' and its assumed

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<sup>1</sup> Pei Shengji, Natural Resource's Management in Mountain Environment, ICIMOD, Kathamandu, Nepal, 1994.

impact on the top soil, water resources, changes in the weather and climate condition at global level, increasing land slides, and floods and several other associated elements have been the primary focus of all regional discussions on Himalayan environment. Since ancient times, people depended, and still depend to a large extent, on agropastoral pursuits as a means of living. In such pursuits man, agriculture, livestock, forests, and pastures are intricately integrated in a complex and inseparable harmony with mountain eco-system. Along with natural forces, increasing population and their needs are exerting pressures on forest resources resulting in depletion, degradation and destruction of forest resources in alarming proportions.

### The Study

In this light the present paper attempts to examine the existing situation and participation pattern in the management of different categories forests in Uttarakhand. Issues related to the problems existing in the management and control of forests and possible alternative options for developing forestation have also been highlighted. The paper is based on secondary data and information collected from various State Government departments, plan documents and studies undertaken during the past.

The forests constitute the most important natural resource in Uttarakhand. They form an eco-system and the protection of forest have remarkable contribution in the process of economic development and environmental stability. Besides their protection functions, they constitute natural biosphere reserves. They are sources of fuel, fodder and timber and crucial in maintaining ecological balance and controlling the region and low lands from various natural calamities such as floods and soil-erosion. Other important production function of forests include supply of timber and bamboo for house construction, railway sleepers, furniture, defence equipments, sports goods, raw materials for paper and other industrial production besides the minor forest produce as oil and soap barries, eatable nuts, and fruits, wax, honey, gum, resin, and products useful for medicines and sericulture activities.

From the economic point of view, the contribution of forests in providing employment and income opportunities to the people is quite significant. Uttarakhand is very rich in the availability of various kind of spices, medicinal plants and herbs and other valuable production in its forests. About 30 per cent spices of the region are not found anywhere else and they include major trees like oak, pines, rhododendrons and numerous lauraceous spices. Uttarakhand is also rich in wild relatives of cultivated plants (125 species) which are required for future crop improvements.<sup>2</sup> Forestry has also been recognised playing an important role in the economy of Uttarakhand. Among the different economic sector forestry and logging is considered to be third most important economic component after agriculture and manufacturing activities in terms of its share in the total net domestic output. As far back as 1978-79 the Uttarakhand forests were contributing 58.22 per cent of the earning of the state U.P. from its stock.<sup>3</sup> However due to unprecedently increasing rate of deforestation which incurred by forest *mafias* and caused by mismanagement of forest departments has shown sharp decline in its contribution both for Uttarakhand as well as for U.P. Between the period 1987-89 and 1990-91, its share has declined from 13.23 per cent to 9.63 per cent respectively.<sup>4</sup>

### Situation of Forests

As per official documents of revenue department the geographical area covered under forests account for 3424.8 thousand hectares which is around 67 per cent of the

<sup>2</sup> Singh S.P., Forest Wealth of Uttarakhand, Valdia K.S.(ed.), Uttarakhand To-day, Almora Book Depo Almora, 1996.

<sup>3</sup> Dhar T.N. and Gupta, S.P., The Himalayan States of India, Development Profiles, SHERPA, Lucknow, 1992.

<sup>4</sup> Mehta, G.S., Development Experiences and Options in a Hill Region : The Case of Uttarakhand, International Centre of Integrated Mountain Development, Kathmandu, Nepal, 1997.

total geographical area of Uttarakhand. But as per sattelite emageries actual covered area under forest account for only 44.31 per cent while according to the National Forest Policy the forest cover area in Himalayan region should not be less than 60 per cent.

The National Remote Sensing data revealed that the actual forest area has increased to about 12.2 thousand hectares between the period 1991 to 1995. In fact the dense forest cover has shown 0.91 per cent growth as against 0.71 per cent negative growth rate of open forest during the same periods. The highest growth in the forest cover has been found in Tehri Garhwal (3.14 per cent) followed by 1.71 per cent in Uttarakashi while the cover area of forest has declined in 0.97 per cent Nainital and 0.55 per cent in Almora and in remaining districts the growth rate ranges below one per cent point.

Accordingly, over half of the geographical area of districts Nainital, Pauri Garhwal, Tehri and Dehradun is covered by forest, yet this is much less than the recommended forest cover area of mountain areas by National Forest Policy. In remaining districts the actual covered area of forest is found at lowest level in Pithoragarh (33.83 per cent followed by Chamoli (34.55 per cent) Uttarkashi (38.66 per cent) and Almora (47.11 per cent). On the whole there has been at least some progress in the aforestation programme in the Uttarakhand which is evident by the fact that the dense forest cover area in almost the districts has increased at some extent, only the exception is the case of district Almora where around 100 hectare of dense forest area has been exploited for different purposes during last five years period. It also further pointed out that the forestation programme in Garhwal division of Uttarakhand has shown a remarkable progress during the past. The forest cover area in Garhwal division has increased from 1339.9 thousand hectares in 1991 to 1355.7 thousand hectare in 1995, showing the growth of 1.18 per cent. As against of this, the forest cover area in Kumaun division has declined from 913.7 thousand hectares in 1991 to 910.1 thousand hectares in 1995, accounting the depletion of 3.7 thousand hectare

TABLE 1 : DISTRICT-WISE FOREST COVER AREA

(IN 000 ha.)

DISTRICTS	Geo-graphical Area	1991			1995			% Change in Forest cover area			
		FOREST AREA			FOREST AREA			Dense Forest	Open Forest	Total	
		Dense Forest	Open Forest	Total	Dense Forest	Open Forest	Total				
MAINITAL		679.4 (100.0)	294.6 (43.36)	65.7 ( 9.67)	360.3 (53.03)	292.6 (43.06)	64.2 ( 9.45)	356.8 (52.52)	0.67	-2.28	-0.97
PITHORA-GARH		885.6 (100.0)	217.8 (24.59)	80.5 ( 9.09)	298.3 (33.68)	218.8 (24.71)	80.0 ( 9.12)	299.6 (33.83)	0.46	0.37	0.44
ALMORA		538.5 (100.0)	209.5 (38.90)	45.6 ( 8.47)	255.1 (47.37)	207.6 (38.55)	46.1 ( 8.56)	253.7 (47.11)	-0.91	-1.10	-0.55
CHAMOLI		912.5 (100.0)	251.9 (27.61)	63.2 ( 6.93)	315.1 (34.54)	253.0 (27.73)	62.2 ( 6.82)	315.2 (34.55)	+0.43	-0.16	0.03
GARHWAL		544.0 (100.0)	215.6 (39.63)	99.3 (18.25)	314.9 (57.88)	220.9 (40.57)	96.9 (17.81)	317.6 (58.38)	2.36	-2.41	0.86
TEHRI		442.1 (100.0)	173.4 (39.22)	74.8 (16.92)	248.2 (56.14)	181.1 (40.96)	74.9 (16.94)	256.0 (57.90)	4.44	-0.13	3.14
UTTAR-KASHI		801.6 (100.0)	258.6 (32.36)	46.1 ( 5.75)	304.7 (38.01)	263.4 (32.86)	46.5 ( 5.80)	309.9 (38.66)	1.86	0.87	1.71
DEHRADUN		308.8 (100.0)	124.3 (40.25)	32.7 (10.59)	157.0 (50.84)	124.3 (40.25)	32.7 (10.59)	157.0 (50.84)	0.00	0.00	0.00
UTTARA-KHAND		5112.5 (100.0)	1745.7 (34.15)	507.9 ( 9.93)	2253.6 (44.08)	1761.5 (34.46)	504.3 ( 9.86)	2265.8 (44.31)	0.91	-0.71	0.54

SOURCE : THE STATE OF FOREST REPORT, DEPARTMENT OF FOREST, LUCKNOW, U.P. AND NINTH FIVE YEAR PLAN, UTTARAKHAND SUB-PLAN, LUCKNOW, U.P.

forests during the period of last four years. Increasing rate of forestation in Garhwal division could be basically due to the fact that the agitations and movements organised against the increasingly cutting of forests in the past has been mainly launched and widely supported by local people. However, such movements has been unsuccessful in Kumaun division because of lack of people participation and poor management of different movements in approaching people at grass root level.

In Uttarakhand forest with thick crown cover with 60 per cent and more crown density occupy only less than 5 per cent of the total area of forests as estimated by selected imageries. Though these forests exhibit great bio-diversity and have rich wildlife, but are in various state of degradation. For less than 6 per cent of the forests of the lesser Himalayan terrain have leaf canopy more than 60 per cent. This indicate the low productivity of forest for about 5.5 to 20.7 tonnes per hectare. The average low productivity is the result of very poor management of unreserved forest.<sup>5</sup>

As per official records of agriculture department the forest area of Uttarakhand was 3438.8 thousand hectares in 1995. During the period 1991 and 1995 about 14 thousand hectares land was brought out under the forestation, thus accounting a growth rate of merely 0.40 per cent in the forest area during last four years period. Almost the Districts of Uttarakhand have made atleast some extent of progress in developing forests, though highest growth of 2.84 per cent in forest area has been estimated for district Chamoli. The exception is the case of Tehri Garhwal and Dehradun where forest area has decreased at 0.35 per cent and 0.27 per cent respectively during 1991 and 1995.

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<sup>5</sup>Valdia, K.S., District Socio-Cultural Identity of Resources and Planning for Development of Uttarakhand, Valdia, K.S. (ed.) Uttarakhand To-day, Almora Book Depot, 1996.

## Management of Forests

The forests in Uttarakhand are largely controlled and managed by forest department and *civil and soyam department*. However in some districts significantly a small area of forests are also under the management of *village van panchayat*, private individuals and defence department etc.

## Reserve Forest

The reserve forests which are managed by forest departments were covering largest area of 69.23 per cent of the total forest area of Uttarakhand in 1995. Though the reserve forest area in almost the districts, except in districts Chamoli and Dehradun, has been increased at some extent between the period 1991 and 1995; but over one fourth of the forest area is under river beds, bouldry area (1.3 per cent), alpine pastures and grass lands (5.4 per cent) snow lands (20.4 per cent) etc.<sup>6</sup> Also these forests are not in sound health. The local people are cutting the oak trees continuously on a large scale for fuel, fodder and using them for house construction and the manufacture of agricultural implements. Due to the clash of interests of forest department and local people the reserve forests are facing intractable problems in their management. This type of major complain has also been consistently experienced in many states of India, therefore in 14 states of the country have constituted the Forests Protection Committees (FPC) by involving the village people. FPC are recognised by the forest department and 2.5 per cent of the total revenue earned from concerned village forest is to be provided to the FPC. This initiative of participating local people in the management, protection and income sharing of forests has been quite successful in most of the states.

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<sup>6</sup> Singh, M. and Lal, M, Land Use Planning in Hill Regions and People Participation; Paper presented in a Seminar on Land Use Planning in Hill region and People Participation, October 27 and 28, 1995 organised by SHERPA, Lucknow, 1995.

TABLE 2 : DISTRICTWISE FOREST AREA IN UTTRAKHAND

(IN 000 ha.)

DISTRICT	1991					1995					% Growth Between 1991 to 1995	
	FOREST AREA					FOREST AREA						
	Forest Dept.	Civil & Soyam	Pancha- yati	Private, Conton- ment	TOTAL	Forest Dept.	Civil & Soyam	Pancha- yati	Private & Con- tention	TOTAL		
NAIMITAL	361.3	19.2	20.8	2.2	403.5	363.0	19.2	20.8	2.2	405.2	0.42	
PITHORAGARH	137.8	121.0	71.4	-	330.0	137.8	121.0	71.4	-	330.3	0.09	
ALMORA	147.2	182.1	62.8	0.1	392.1	147.2	182.1	62.8	0.1	392.1	0.00	
CHAMOLI	363.9	104.3	52.2	-	520.1	378.4	104.3	52.2	-	534.9	2.84	
GARHWAL	240.3	180.6	29.6	0.5	451.2	238.8	180.6	29.6	0.6	449.6	-0.35	
TEHRI	269.4	127.8	-	-	397.2	269.4	127.8	-	-	397.2	0.00	
UTTARKASHI	695.5	14.8	-	-	710.3	695.5	14.8	-	-	710.3	0.00	
DEHRADUN	151.3	51.6	-	16.9	219.8	150.7	51.6	-	16.9	219.2	-0.27	
UTTARAKHAND	2366.9 (60.10)	801.4 (23.39)	236.8 ( 6.91)	19.8 ( 0.57)	3424.8 (100.00)	2380.8 (69.23)	801.4 (23.30)	236.8 (6.88)	19.8 (0.57)	3438.8 (100.00)	0.40	

SOURCE : ANNUAL PLAN; UTTARAKHAND SUB-PLAN, 1995-96 AND 1997-98, VOL.I, LUCKNOW, U.P

This would be a quite important measure to regenerate various forest products and to protect the forest from fires and increasingly cutting by forest *mafias* and *contractors*.

### **Civil and Soyam Forests**

The civil and soyam lands accounting for 23.30 per cent of the total forest area are owned by the Revenue department but the usufruct belongs to local people. These land areas are generally used for grazing of animals. This category of land could also be allotted for the construction of panchayat ghar, schools, hospitals, rehabilitation of people caused by natural calamities such as, floods, earth quake, land slides etc. and different welfare related programmes such as scheduled caste tribe settlements etc. The aforestation programme has been initiated in this land by the civil soyam wing of Revenue department through Block Development and Tehsil authorities. The locally available different species of trees, generally chir, pine, oak etc. has been planted in this land. The productivity of these lands is very low. Moreover, due to the use of civil land on other than forestation at large proportion of the actual forest area has been decreased at certain extent. However as per the official records programmes such as scheduled caste tribe settlement etc. The aforestation programme has been initiated in this land by the civil soyam section of revenue department through block development and tehsil authorities. The locally available different species of trees generally chir, pine, oak etc. has been planted in this land. The productivity of these lands is very low. Moreover, due to the use of civil land on other than forestation at large the actual forest area has been decreased at certain extent. However as per the official records the forest area under civil and soyam department is constantly 801.4 hectare for the past several years.

### **Forest Panchayats**

The forest panchayats were formed in the districts Almora, Pithoragarh and Nainital of Kumaun division and districts Chamoli and Pauri Garhwal of Garwal

division during the British rule in India in 1931. However, in the remaining districts of Garhwal the forest area could not be brought out under the *forest panchayat* because they were the part of Tehri kingdom. A *forest panchayat* consists of 5 to 9 members elected by the local people. The members elect their own Sarpanch for a period of 5 years. The Sub-Divisional Magistrate is designated as the *forest panchayat officer*. He is assisted by the *forest panchayat inspectors* who are also senior *kanoongo* of the Revenue department.

The function of the forest panchayats are as follows:

1. To check indiscriminate cutting of trees, tempering of fencing by villagers.
2. To earmark sylviculturally fit trees for felling.
3. To prevent encroachment on van panchayat lands.
4. To fix boundary pillars and to maintain them.
5. To carry out the directions of the Deputy commissioner or Sub Divisional Magistrate regarding the administration of these forests.

The forest panchayat can carry a fine upto Rs.50/- with the prior approval of the Deputy Commissioner. Van panchayat can also forfeit weapons of the offenders. The financial power of the forest panchayats are as follows.

1. They can sell the grass and fallen twings for fire wood and stones and slates to local people.
2. Rasin tapping and felling of trees can be taken up with the approval of the forest department.
3. Auction of trees upto the estimated value of Rs.500 and fodder land areas with the approval of the Divisional Forest Officer.
4. Auction above Rs.5000 are conducted by the Forest Department with the approval of the Conservator of forests.

The income generated from different sources of van panchayats is deposited with the Sub-Divisional Magistrate. However, this money is not readily available to the Forest Panchayats for undertaking any kind of development and the welfare of local people. The responsibility of preparing working plan for Panchayats Forest rests with the Forest Department under the Van Panchayat Act of 1976. But, both the revenue and forest department act as water and ward organisations.<sup>7</sup>

These Forest Panchayats were once luxurious prime forests as they were formed from the new reserve forests which were dererned due to people's agitation and mass movements. However, now the encroachment on the forest panchayat and pilferage of grass, fodder leaves, fuel, timber etc. is the common practice. Forestry is a science but the management of van panchayats, so far the silvicultural aspects have been total neglected.<sup>8</sup>

The forest area under the management of Forest Panchayats is 236.8 thousand hectares accounting for around 7 per cent of the total forest area of the region. There has been not any change in the area reported under the Forest Panchayat for the past several years. The of forest of Van Panchayat is considerably at much larger level in Pithoragarh (71.4 thousand hectares), followed by Almora (62.8 thousand hectares) which share around 32 per cent for former district and 22 per cent for later district in the total forest area of the region.

However, the Forest Panchayats in Uttarakhand are badly managed and over exploited by local people because of their nature as common property. Wherever the

<sup>7</sup> Shah, S.L., Planning and Management of Natural and Human Resources in the Mountains, Yatan Publications, New delhi, 1986.

<sup>8</sup> Joshi, D.P., The Institutions of Van Panchayats in U.P. Its Future, Paper presented in a seminar on "General Sustainable Forestry in the U.P. Hills; Forest Department, Nainital, October, 1995.

users have independent rights the use of common property including forest resources, no user can control the activities of the other users. Total demand exceeds the supply and if there is no organisation to enforce discipline, unrestricted exploitation is bound to result in degradation of the resources.

Increasing tussle between the forest and revenue departments for power over the management of the Van Panchayat has also influenced the local people to undertake encroachment in the Van Panchayat Forests. At present the revenue department is administering the activities of Van Panchayats while the forest department has to look into the technical matters. Practically neither forest department nor revenue departments are seriously concerned in the management and providing technical support as required for the promotion of forests covered under Van Panchayats. The revenue department has been singularly incompetent to handle the affairs of Van Panchayat. A large number of cases against the local people those were engaged in the over exploitation of forest products, encroachment and several illegal activities over the forests of Van Panchayats are pending with the revenue department for the past several years without making any decision in this regard. Inability of revenue department to decide upon the long standing cases of defaulters of Panchayati Forests has further strengthened and influenced the participation of local people in increasing level to undertake various illegal activities on the forest land of Van Panchayats at increasing level.

### Alternative Options

Rather than decide over the distribution of management and certain other powers between revenue and forest department it will be more appropriate and advantageous measure to vest almost all power with Van Panchayat.<sup>9</sup> In fact the Van

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<sup>9</sup> Saxena, N.C., Common, Trees and the Poor in the Uttar Pradesh Hills, Overseas Development Institute, London, 1987.

Panchayat should be provided either the status of autonomous body or it should be merged with the newly formed Village Panchayats. The Village Panchayats which are constitutionally formed, electing the Pradhans and its members by the local people of the concerned villages can well understand the local situations and problems. It is expected that empowering Village Panchayats over the administration, management control, solving forest related problems and disputes and planning for development of forestation would certainly be a instrumental measure for solving the increasing problems of deforestation in Uttarakhand. In addition to this several other alternatives approaches could also be suggested for reducing the problems of deforestation. However, initiation of any kind of approach in this regard would necessarily require the maximum participation of local people at all stages and process of its properly implementation. In some areas of mountains the attempts at involving community participation in forest regeneration has been quite successful in the past. In fact, the National Forest Policy, 1988 has well emphasised the importance of people's involvement in the development and protection of forests. The need for working out the modalities for giving due benefits to the village community living close to the forest land to ensure their participation in the aforestation programme has also been well emphasised ;by the Ministry of Environment and Forest in 1989.

### People's Participation in Forest Management : Some Examples

The community forestry programme, as it known in Nepal, launched in bordering areas of Pithoragarh (Dharchula), and the social forestry programme introduced in Uttarakhand were two important initiatives launched in the mid 1970's. Based on the concept that people are the critical component in forest management, these programmes have transformed traditional government forestry activities and attitudes to meet the local villagers needs. These new approach of involving local

people in forest management activities has shown quite significant progress in the regeneration of forests in common land areas of Nepal mountains.<sup>10</sup>

In Uttarakhand, the social forestry programme implemented by Forest Panchayats and Gram Sabhas in different districts of hills has been quite successful measure in terms of the regeneration of forests. A study undertaken by Shah<sup>11</sup> in four blocks of district Almora revealed that out of the total ;of 35 social forestry projects undertaken in 1728 hectares land area about 49 per cent projects have successful in the regeneration of different local variety trees. In fact all the forestry projects of two blocks namely Garur and Bhikhiwas had been successful in growing local species of trees and grass. However, the projects carried out by Van Panchayats has shown better progress than those were done by Gram Sabhas. Only those projects which had a survival rate of 60 per cent of trees and above and where incursions had not been common by tempering with walls, and intrusion by animals were regarded as successful projects.

Another social forestry programme was introduced by the Central Himalayan Environment Association in 11 villages of the Khulgar Watershed area near Almora Town in 1986 by involving the local people. Locally available species and tree plants were used for aforestation on about 73 hectares of land. The success rate of plantation averages 55 per cent. In some villages it was as high as 90 per cent<sup>12</sup> Thus providing increasing emphasis on maximising the participation of local people in the programmes related to the preservation and regeneration of forests in Uttarakhand would be a instrumental measures. However, the programmes at involving people in

<sup>10</sup> Shengji, p., Natural Resource Management, ICIMOD, Kathmandu, Nepal, 1993.

<sup>11</sup> Shah, S.L., Planning and Management of Natural and Human Resources in the Mountains, Yatan Publication, New Delhi, 1986.

<sup>12</sup> Mehta, G.S., Development Experiences and Options in a Hill Region; The Case of Uttarakhand, U.P., ICIMOD, Kathmandu, Nepal, 1997.

forest management could not be successfully done along by the Government itself, so the strong support of institutions and NGO's would be quite necessary in this regard. Lack of institutions participating at the local level, and capable of managing forest resources, is a great constraint on forest development. Such institutions will have to be helped to involve and strengthened through appropriate programmes.